



COMPUTER SCIENCE

in

ARKANSAS



ARKANSAS CS EDUCATION WEEK

December is here and Computer Science Education Week has come and gone. If you are an Arkansan, you should be very proud because we hosted the national kickoff event for this most important of weeks in the Governor's mansion on December 4th! Arkansas has joined the ranks of the White House, the New York Stock Exchange, and Silicon Valley as sites for this prestigious event.

Delegates from more than 22 other states gathered to hear Governor Asa Hutchinson, chair of the National Governor's Association, kickoff the week along with keynote speaker Hadi Partovi, CEO and founder of Code.org. Partovi discussed the national computer science education movement and shared with participants new data collected that highlighted the importance of teaching computer science and where we stood as a nation. Then Partovi spoke of Arkansas and the state's collective efforts to remain number one in the nation.

"With amazing computer scientists Sarah, La'Mia, and Caden at the CS Education Week kickoff as guests of Arkansas Governor Asa Hutchinson. These 3 stole the show! When I talk to tomorrow's future technologists it always reminds me that the future is so bright! #CSEverywhere", stated Partovi later on Twitter.

The remaining sessions were devoted to various panels: Computer Science Engagement Panel, National Computer Science Education Leadership Panel and the State Education Leader's Panel. Several participants commented how much they enjoyed hearing from the student panel that was lead by Romy Drucker, K-12 Education Program Director from the Walton Family Foundation. She spoke with Caden Cash, from Conway High School, La'Mia Crutchfield from Bryant High School, and Sarah Humphries from Lake Hamilton High School. Each student addressed how computer science has impacted their lives and the different ways teachers have engaged and encouraged them throughout their journey. In a show of support, their teachers—respectively, Kimberly Raup, Brenda Qualls, and Ashley Kincannon—were present and recognized.

Gov. Hutchinson also made an important announcement that the Arkansas Computer Science and Computing Initiative has been selected as the newest regional training partner associated with Code.org.

Under this partnership, Arkansas' team of computer science specialists will go through Code.org's AP CS Principles training over the next year and will then begin providing professional development opportunities.

CS ED WEEK CONTINUED

“Arkansas has been a lighthouse state for Code.org since 2015, and because of Code.org’s policy suggestions and support, which has informed much of our work, Arkansas became and remains the leader in K-12 Computer Science and Computing Education,” Anthony Owen, state director of Computer Science, said. “We are excited to become a regional training partner, which will allow us to provide training on high-quality Advanced Placement Computer Science curriculum that schools can access at no charge.”

More information about Code.org’s Regional Partner Program can be found at <https://code.org/educate/regional-partner>. Arkansas will have a dedicated page available at that site soon. Professional development opportunities will be linked, as they are scheduled, at <https://csforar.info/PD>.

Recordings of the events can be accessed on the CSforAR Youtube channel available here: <http://bit.ly/CSFORARYT>.



DO YOU SEE WHAT I SEE?

How did you celebrate CS Education Week? The CSforAR Team wants to hear from you, and you might just be featured in our January Newsletter.

Drop us a line at CSforAR@ade.arkansas.gov, swing by our Coffee Cafe at bit.ly/ARCSCoffee or tag us in all of our social media as @CSforAR!

CS ED Week is all about igniting curiosity and engaging our future coders, makers and thinkers. Let us know what inspired you and how you are passing it forward!

LEARNING BLADE CORNER

Happy Holidays from all of us at Learning Blade! We are excited to let you know about some upcoming Back-to-School webinars we are planning for early January. We will focus on the important topics listed as well as provide refresher training on the Learning Blade resource.

If you are new to Learning Blade, we provide schools 400 online, grade 5-9 standards-aligned lessons, which focus on more than 100 STEM/CS/CTE careers and technologies, in addition to teacher lesson plans and PBL activities.

Sign up for your free Learning Blade account at www.learningblade.com/AR

To request (free) PD for your staff at a different time, or simply talk to our team about Learning Blade please email us at info@learningblade.com.



[Middle Schools Can Build Tomorrow's Workforce](#)

Monday, January 3, 2022, at 12:00 pm CT (1:00 pm ET)

[Increasing Underrepresented Participation in STEM](#)

Tuesday, January 4, 2022, at 8:00 am CT (9:00 am ET)

[STEM Challenges using Offline Resources](#)

Tuesday, January 4, 2022, at 11:00 am CT (12:00 pm ET)

[Supporting Computer Science](#)

Wednesday, January 5, 2022, at 4:00 pm CT (5:00 pm ET)

[CTE Perkins V in Middle School](#)

Thursday, January 6, 2022, at 3:30 pm CT (4:30 pm ET)

[A conversation with two STEM Educators of the Year](#)

Tuesday, January 11, 2022, at 12:00 pm CT (1:00 pm ET)

PATRICK SAWATSKY

STEM PROGRAM ADVISOR FOR DCTE

Patrick Sawatsky joined the DCTE team at the beginning of this school year, and jumped directly into the deep end. Sawatsky, the STEM program advisor for the Division of Career and Technical Education, is eager to help teachers and students.

"I am here to support CTE STEM educators and programs across the state. If you need anything CTE STEM related, contact me. If you're not sure what you need or how to ask it, still contact me. Teachers have too many responsibilities and I hope that my work here makes things a little easier for them."

Another large portion of Sawatsky's job is his work and leadership with the Technology Student Association (TSA). This organization is one of the many Career and Technical Student Organizations. The mission of TSA, as found on the national web page at <http://tsaweb.org>, is to: "...enhance personal development, leadership, and career opportunities in science, technology, engineering, and math (STEM), whereby members apply and integrate these concepts through, intracurricular activities, competitions, and related programs."



Arkansas has 28 TSA Chapters, with Sawatsky hoping to see the number and size of the chapters grow.

"Through TSA I get to see students grow, learn, lead, form friendships, and compete. It's the best part of my job. I couldn't have left the classroom if I didn't have a chance to continue working with students. It's rejuvenating to see students succeed outside of the classroom."

Sawatsky previously taught middle school math and science in Beebe for 8 years. He expressed that he loved teaching there, and it was a hard decision to move to his new position. He said that the change to DCTE has been beneficial for learning new things and progressing his career. In addition, while Sawatsky stated that he initially lucked his way into computer science, he's looking forward to adding the 528 CS endorsement to his license.

"I am not an expert in computer science. When the core science standards changed some years back, I skipped the cluster on engineering, technology, and applications of science for the first year. Eventually I decided to try something new. I started a unit on engineering and loved it. We built golf ball ramps and had competitions. The students—and I—had so much fun."

"The next year I added a unit on programming. I knew almost nothing about coding, but I wanted to push myself. The kids loved it. Most of the students also had no background in programming, but it's so much fun. Those two units became my favorites."

Sawatsky can be reached by phone (501.682.1579) or by email (Patrick.Sawatsky@ade.arkansas.gov).

ORNAMENT SCAVENGER HUNT

In celebration of Computer Science Education Week 2021, the CSforAR Team hosted a CS Scavenger Hunt for all ADE Employees! Winners were required to read the clues, find the ornament piece, and then post an image on our social media accounts or email us! At the end of course, they would have a CSforAR Christmas Ornament! Congratulations to all our winners! You should be hearing from us soon about your prize!





COMPUTER SCIENCE HEROES

A RECAP OF OUR CS ED WEEK DAILY HEROES!

Grace Hopper, a naval officer, was a pioneer of computer programming. Many of us know her history with the term computer bug, but there is so much more to learn about this amazing pioneer, like her birthday is December 9, 1906! CSEdWeek is scheduled in December in honor of her birthday!



Jerry Lawson has had a major impact on gamers' lives and brought a lot of innovation to the early industry. Lawson, a field applications engineer for Fairchild Semiconductor, is credited with developing the modern game cartridge, utilizing a microprocessor for gaming, and basically moving video games from single-game refrigerator-sized arcade cabinets to the start of the consoles we have today. Fairchild recognized success and promoted Lawson to Director of Engineering and Marketing for their video game division.



Hedy Lamarr born in 1913 started her career as an actress. Years later she was recognized as a noted inventor of a radio communication device. Hedy was also instrumental in creating improvements to traffic signals. In 1942 Hedy patented a device that used the idea of an encryption system that could not be jammed. This technology was instrumental in the development of wireless communications such as those found in mobile phones and Bluetooth.



Elon Musk is well known for Tesla electric cars, his work with PayPal, and of course the fact that he wants to build a place for humans to live on Mars (SpaceX). Did you know however, that he taught himself to program computers at the age of 10? He also sold his first video game by age 12! Musk uses his knowledge of computer science to build innovations he's passionate about like climate change and space exploration.



Our last CS Hero of the Day is an Arkansan from Pine Bluff! Raye Jean Montague was an internationally registered professional engineer (RPE) with the U.S. Navy and is credited with creating the first computer-generated rough draft of a U.S. naval ship. Though originally hired as a clerk typist, she finally had a chance to work on a UNIVAC 1 computer on the day all the engineers called in sick. She took classes to continue to learn and rose through the ranks. In the 1970s, her team was given a month to come up with a draft of a ship, and she had one ready in approximately 19 hours. This meant she has been recorded as the first person to draft a ship using a computer! She was inducted into the Arkansas Black Hall of Fame in 2013 and the Arkansas Women's Hall of Fame in 2018. We wanted to round out our CS ED Heroes with one of our own, and we cannot think of a better example, which is why Montague is eternally our Friday CS Hero!

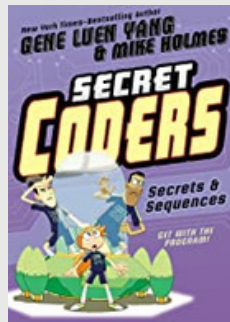


MORE THAN 8,000 BOOKS DONATED

Over the previous four years, the Office of Computer Science has donated to approximately 900 K-8 public school libraries. The libraries have received coding devices and more than 8,000 coding-related books. For 2021, additional computer science and computing related books will be distributed to public school libraries around the state, and for the first time Arkansas public high school libraries will receive books and public library systems within the state will have access to copies of the books. Books will be mailed directly to public school libraries and public library system headquarters over the next few weeks.

“The Arkansas State Library is thrilled to partner with ADE's Office of Computer Science for Computer Science Education Week,” stated Jennifer Chilcoat, Director of the Arkansas State Library system. “Bringing these titles into our public libraries, as well as in the libraries of local schools, drives home the importance of computer science education in Arkansas, and allows our students to access these titles wherever they are. Public libraries have long been advocates of computer science and other tech-based learning, as evidenced by Teen Tech Week, Maker Spaces, and Coding Camps that take place around the state, so ASL is excited to support these efforts to foster a love of computer science among Arkansas' young learners.”

- Public school libraries that serve students in any combination of grades K-5 will receive a copy of *The Girl With a Mind for Math: The Story of Raye Montague* (Amazing Scientists, 3), *Secret Coders: Secrets & Sequences* (Secret Coders, 3), and *Elon Musk: A Kid's Book About Inventions* (Mini Movers and Shakers).
- Public school libraries that serve students in any combination of grades 5-8 will receive a copy of *Secret Coders: Secrets & Sequences* (Secret Coders, 3) and *Elon Musk and the Quest for a Fantastic Future: Young Readers' Edition*.
- Public school libraries that serve students in any combination of grades 9-12 will receive a copy of *Overnight Code: The Life of Raye Montague, the Woman Who Revolutionized Naval Engineering*, *Elon Musk and the Quest for a Fantastic Future: Young Readers' Edition*, and *Warcross* by Marie Lu.
- The 60 public library system headquarters will each receive three copies of all books to share with their community libraries within the system.



THE FIRST LADY'S SELECTION

First Lady Susan Hutchinson selected the two books about Dr. Raye Montague and stated, “Raye overcame every obstacle to realize her dream which made a path for us all to excel in computer science.” The First Lady selected these books to ensure that Dr. Montague’s story was available for all Arkansas students to know her story and to draw inspiration.

The Arkansas State Library chose *Overnight Code*, in addition to 20 other titles, as one of their "Arkansas Gems" for 2021. More information about the Arkansas Gems program can be found at <https://www.library.arkansas.gov/programs/arkansas-center-for-the-book/arkansas-gems/>



SCHOOLS RECOGNIZED FOR THE GOLD MEDAL SCHOOL PROGRAM



The Arkansas Department of Education (ADE) Office of Computer Science is pleased to announce the continuation of the Computer Science Gold Medal School Program (ACSGM) and the rankings for the 2020-2021 ACSGM, the inaugural year of the program. The ACSGM was announced via Commissioner's Memo COM-21-048 in the fall of 2020, and was designed to recognize Arkansas high schools for outstanding work in supporting and implementing the Arkansas Computer Science and Computing Initiative. Schools are ranked based on information submitted to and reviewed by the ADE Office of Computer Science. The criteria that forms the basis of the rubric centers on Governor Asa Hutchinson's 5-year goals and the recommendations of the 2020 Arkansas Computer Science and Cybersecurity Task Force.

As part of the ranking rubric, schools may receive no ranking, honorable mention, bronze, silver, or gold ranking, with gold ranking being the highest level and requiring high performance in a majority of the criteria.

For the 2020-2021 cycle, the ADE Office of Computer Science received and reviewed twelve applications. Of those twelve applications, three schools received a Bronze level recognition with three schools receiving an honorable mention. Those rankings, in alphabetical order, are as follows:

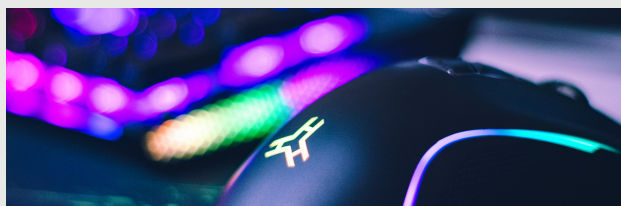


Arkansas High School in Texarkana - Honorable Mention
Arkansas School for Mathematics, Sciences, and the Arts - Bronze
Bentonville High School - Bronze
Bentonville West High School - Bronze
Russellville High School - Honorable Mention
Springdale High School - Honorable Mention



The ADE Office of Computer Science, based on feedback from this past year, has revised the rubric and simplified the application process for schools and district personnel. Authorized District and School personnel will submit responses for each of the requested categories. This submission will then be sent to the School District Superintendent for certification. The ADE Office of Computer Science will review the certified submissions and request documentation if deemed necessary. The submission portal (<https://www.surveymonkey.com/r/ACSGM>) is now open and will close at 11:45p.m. on January 31, 2022.

Rankings for the 2021-2022 school year will be announced during the Summer of 2022.



There is still time to get your game on! Well, your students' games on, that is. The Great Arkansas History Video Game Coding Competition will be wrapping up early March, but there is still a chance for your school to start, plan, build, create and play their way to victory for prizes and scholarship money!

This competition is open to Arkansas students in the 4th through 8th grade. Teams may consist of no more than six students in grades 4 - 8, and is open to public, private, and homeschool students with Arkansas residency.

The theme for this year is My Favorite Arkansas Town. Submission instructions will be posted at <https://bit.ly/ARCSHistComp> prior to the submission window opening. Contest rules can be accessed at: <http://bit.ly/ARCSHistCompRules>. Questions? Email us or visit us in the Coffee Cafe.

\$15,000.00 Award for the 4th Annual

CS EDUCATOR OF THE YEAR

APPLICATION DEADLINE FEB. 28, 2022

This award is open to anyone holding an Arkansas Educator's License in good standing, and currently working in an Arkansas K-12 public or public charter school. The selection process will seek educators who demonstrate a strong commitment to and substantial impact on the CS initiative in their school and community: the scoring rubric will include, but is not limited to, consideration of evidence of direct student, school, community, and state impact; evidence of personal commitment to professional growth; and evidence of commitment to and excitement about the #CSforAR and #ARKidsCanCode Computer Science Initiative.

Five finalists will be selected from the applicants, and each will receive \$2,500.00. From those five, one will be selected as the Arkansas Computer Science Educator of the Year for 2022 and receive an additional \$12,500.00 award.

Apply at <https://www.surveymonkey.com/r/ARCSEOY2022>

DECEMBER CS ACTIVITIES & EVENTS

'TIS THE SEASON TO BE

JOLLY

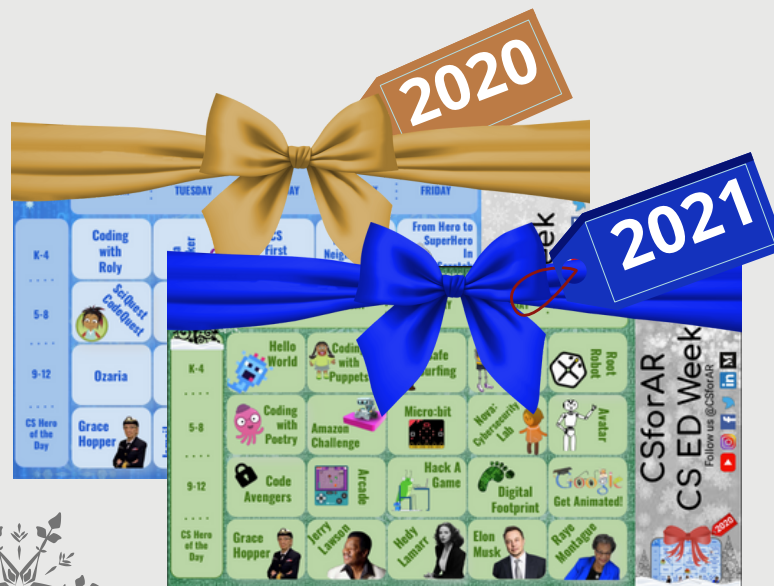
CHRISTMAS CODING

Here are some fun ways to get a daily dose of code during this holiday season!

- Advent of Code 2021:
<https://adventofcode.com/> This site releases a new programming challenge every day from now until the 25th. You can also work on challenges from previous years!
- Try Hack Me:
<https://tryhackme.com/christmas>
Try Hack me is a great site to visit to learn and explore concepts related to cybersecurity.
- Tech Journey Christmas Coding Challenges:
<https://www.techjourney.org/the-christmas-coding-challenge/>
- Can You Computer Christmas Coding:
<https://www.canyoucompute.co.uk/christmas-coding.html>

TEACHER RESOURCE CHOICE BOARD

The resource document is made up of a variety of computer science activities that have been divided into grade bands: K-4, 5-8, and 9-12. Each day also highlights one of many computer science heroes. If you only have one or two days available in your classroom, pick and choose the activities that best suit your needs.



Hint: There is a link to the 2020 version as well!

FREE FESTIVE CS ACTIVITIES

<https://bit.ly/CSDecActivities>

MORE THAN

1,615

CLICKS & MORE THAN
204 COUNTRIES

The CSforAR Team has put together 20 Computer Science Activities for Grades K-8. Make sure that you check them out. These activities have more than **1,600 views** and have been seen by more than **204 countries!** If you are a high school teacher, there are several activities that could be modified for your classroom as well.

Each activity includes printable links and instructions for the teacher; these can be found in the notes of each slide. Suggestions for appropriate grade levels are detailed on slide 2. Above all, feel free to modify any of the activities to fit your classroom.

CS COMPLETER CORDS

The Arkansas Department of Education (ADE) Office of Computer Science is pleased to announce that the state is providing Arkansas seniors with Computer Science Completer graduation cords. These cords are available at no cost to any Arkansas senior (public, private, or homeschool) who is graduating with a minimum of three credits of ADE-approved high school computer science coursework.

Cords may be requested by counselors/registrars using the form found at: <https://csforar.info/CompleterCords>. Parents of homeschooled students may request a cord for their child through the form.

Note: The ADE Division of Career and Technical Education (DCTE) also has a specific designation for “completer” status for school data reporting purposes. The requirements for a student receiving one of the Arkansas CS Completer Cords does not modify existing requirements for a student to be recognized as an official completer under the reporting requirements of DCTE.



SPRING PRAXIS PREP & 5016 PD

Join CS Specialists for our 30-hour Praxis Preparation course on the following Saturdays:

- January 22
- January 29
- February 5
- February 12



Each day will start at 8:30 a.m. and conclude at 4:30 p.m.

Participants who complete all 30 hours will qualify to receive their 5016 approval code should they wish to pursue it.

Visit bit.ly/CSforARPD for more information and to register.

HIGH SCHOOL HACK FEBRUARY 12

ASMSA CS Teacher Nick Seward will be hosting the annual High School Hack/CTF event at ASMSA. While Seward is the host, his CS students create the challenges and work as Game Masters during the event.

The event is open to students of all levels of computer science and is extremely fun. The registration can be found at: <http://compsci.asmsa.org/hack/>.



UPCOMING CS TRAINING

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#CSFORAR COFFEE CAFE

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